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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,044	12/05/2003	Jonathan D. Albert	INK-029C1	9323

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EXAMINER

LEWIS, DAVID LEE

ART UNIT PAPER NUMBER

2629

DATE MAILED: 03/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/729,044

Applicant(s)

ALBERT ET AL.

Examiner

David L. Lewis

Art Unit

2673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 9-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9-20 is/are rejected.
- 7) ☐ Claim(s) 9-20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/5/2003</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Specification***

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: claims 9 and 17 recite "said encapsulated electrophoretic display medium". The term encapsulation was not previously used in the claim and it is not clear what the Applicant intends to say. Therefore claims 9-20 are objected to.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**1. Claims 9-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sheridan (5389945), Sheridan (4126854) incorporated by reference in view of Naoyuki (JP 01086116).**

**As in claims 9 and 17, Sheridan (945) teaches of an electrostatically addressable display, figure 8, column 2 lines 1-20,**

**comprising: (a) a substrate, figure 8 item 28;**

(b) an display medium disposed adjacent to said substrate, said display medium comprising a plurality of cavities dispersed in a polymeric matrix, **figure 8 item 26**,

wherein at least one of said plurality of cavities contains an electrophoretic conact media phase that includes at least one particle and a suspending fluid; **figure 3 item 37**

and (c) a movable electrode, wherein application of electrostatic charge by said movable electrode to said display medium modulates an optical property of said display medium, **column 2 lines 1-20, figure 2 item 30, figure 8 item 80, figure 9 item 86**

**However Sheridan (945) is silent** as to said display being an electrophoretic display.

**Sheridon (854) teaches** encapsulated spheres 14 are an improved alternative to electrophoretic particle migrating displays because the electrophoretic displays have the problem of particles sticking to the electrodes and particles clumping together over a period of time. Sheridan also teaches magnetic particle displays have been introduced as an alternative in order to overcome the size limitations and power requirements of other displays as a display alternative. However the requirements of the magnetic field present its own problems. Sheridan implies the electrophoretic display would be a useful alternative to the twisting ball display if its problems could be solved.

**Naoyuki teaches** the problem provided by the electrophoretic particle migrating display can be solved by encapsulating the particles into microcapsules, giving Sheridan another viable display alternative, see the abstract. Because Naoyuki teaches of a known alternative to the twisting ball display of Sheridan and the problem noticed by Sheridan is solved by Naoyuki, it would have been an obvious design choice to the skilled artisan at the time of the invention to take advantage of the display employing the migration of color pigment particles to form an image on a matrix addressable panel, because said color features are useful for showing contrast on displays. Further wherein Naoyuki teaches of a plurality of microencapsulated particles dispersed in a fluid, said microcapsules being equivalent to the plurality of cavities dispersed in a polymeric matrix as claimed, and being substituted for the twisting balls of Sheridan.

**Therefore it would have been obvious** to the skilled artisan at the time of the invention to use and alternative to the twisting ball addressing device of Sheridan, by adapting the microcapsulated display of Naoyuki, into the twisting ball device of Sheridan, because such an electrophoretic particle migrating display has known color contrast advantages useful for display purposes as known in the art and suggested by Sheridan (854), as found in claim 9. Naoyuki provides the motivation to use the electrophoretic as a design alternative to the twisting ball display by solving the problem notice by Sheridan (854).

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**As in claim 10, Sheridan (945) teaches of** wherein said substrate further comprises a clear conductive coating, column 2 lines 1-6, figure 3 item 54, column 4 lines 65-67, wherein the a thin conductive layers deposited is on the ground plane, Sheridan (854), figure 5 item 12 and 40.

**As in claim 11, Sheridan (945) teaches of** wherein said clear conductive coating comprises an ITO-coated polyester, column 4 lines 55-67, wherein said thin electrodes are made of ITO as known in the art.

**As in claim 12, Sheridan (945) teaches of** wherein the clear conductive coating is connected to ground potential, figure 3 item 54, column 4 lines 65-67, wherein the a thin conductive layers deposited is on the ground plane.

**As in claim 13, Sheridan (945) teaches of** further comprising a dielectric sheet disposed adjacent said display medium, column 3 lines 54-67, Sheridan (854), column 1 lines 5-15, column 4 lines 35-45, wherein the dielectric sheet is disposed next to the contrast medium.

**As in claim 14, Sheridan (945) teaches of** wherein said dielectric sheet further comprises a coating having low conductivity, column 3 lines 54-67, Sheridan (854), column 1 lines 5-15, column 4 lines 35-45, wherein the dielectric sheet is disposed next to the contrast medium.

**As in claim 15, Sheridan (945) teaches of** wherein said substrate further comprises an opaque conductive coating, column 6 lines 5-23.

**As in claim 16, Sheridan (945) teaches of** wherein said movable electrode comprises a stylus, figure 8 item 80, column 6 lines 4-23.

**As in claim 18, Sheridan (945) teaches of** further comprising the step of scanning said movable electrode over said display medium, column 3 lines 25-45, column 6 lines 15-23.

**As in claim 19, Sheridan (945) teaches of** wherein the step of scanning said movable electrode over said display medium is performed substantially contemporaneously with the step of applying an electrostatic charge from said movable electrode to said display medium, column 2 lines 1-20, column 3 lines 25-45, column 6 lines 15-23.

**As in claim 20, Sheridan (945) teaches of** wherein the step of scanning said movable electrode over said display medium and the step of applying an electrostatic charge from said movable electrode to said display medium are performed sequentially, column 2 lines 1-20, column 3 lines 25-45, column 6 lines 15-23.

**Conclusion**

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. 6710540, 6177921, 5223115,


3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **David L. Lewis** whose telephone number is **(571) 272-7673**. The examiner can normally be reached on MT and THF from 8 to 5. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala, can be reached on **(571) 272-7681**. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571)-273-8300.

4. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Examiner: David L. Lewis

March 20, 2006

A handwritten signature in black ink, appearing to read 'David L. Lewis', is written over the date 'March 20, 2006'.